



Daffodil
International
University

Lab Report

Course Title: Web Engineering Lab

Course Code: CSE416

Experiment No: 04

Experiment Name: Retrieve and Display Data from the Database on a Webpage

Submitted To:

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Objective:

Here are the main objectives of the Lab:

- Bind the PHP to mySQL database.
- Retrieve data from the database table.
- Present information and data retrieved on a web page in a dynamic manner.
- Add the search to process the data, which is limited according to user input.
- Make use of prepared statements to guarantee safe database queries.
- Use CSS to have a more formatted presentation of the web page.

Code:

[index.php:](#)

```
<!DOCTYPE html>

<html>
<head>
    <title>Insert User</title>
    <link rel="stylesheet" href="index.css">
</head>
<body>

<h2>User Registration Form</h2>

<form action="insert.php" method="POST" class="user-form">
    <label>Name:</label>
    <input type="text" name="name" required>

    <label>Email:</label>
    <input type="email" name="email" required>

    <label>Age:</label>
    <input type="number" name="age" required>

    <label>Password:</label>
    <input type="password" name="password" required>
```

```

<label>Gender:</label>
<select name="gender" required>
    <option value="">--Select--</option>
    <option value="Male">Male</option>
    <option value="Female">Female</option>
</select>

<label>Course:</label>
<input type="text" name="course" required>

<label>Phone:</label>
<input type="text" name="phone" required>

<label>Department:</label>
<input type="text" name="department" required>

<button type="submit">Submit</button>
</form>

</body>
</html>

```

Insert.php:

```

<?php
$host = "localhost";
$dbname = "userdb";
$username = "root";
$password = "";

$conn = new mysqli($host, $username, $password, $dbname);

```

```

if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$name = $_POST['name'];
$email = $_POST['email'];
$age = (int) $_POST['age'];
$password_raw = $_POST['password'];
$gender = $_POST['gender'];
$course = $_POST['course'];
$phone = $_POST['phone'];
$department = $_POST['department'];

$password_hashed = password_hash($password_raw, PASSWORD_DEFAULT);

$stmt = $conn->prepare("INSERT INTO users (name, email, age, password,
gender, course, phone, department) VALUES (?, ?, ?, ?, ?, ?, ?, ?)");
$stmt->bind_param("ssisssss", $name, $email, $age, $password_hashed, $gender,
$course, $phone, $department);

if ($stmt->execute()) {
    echo " New record inserted successfully.<br><br>";
    echo "<a href='display.php'>View All Records</a>";
} else {
    echo "☒ Error: " . $stmt->error;
}

$stmt->close();
$conn->close();
?>

```

display.php:

```
<?php

$host = "localhost";
$dbname = "userdb";
$username = "root";
$password = "";

$conn = new mysqli($host, $username, $password, $dbname);
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$search = $_GET['search'] ?? '';
$searchPerformed = false;
$results = [];

if ($search !== '') {
    $searchPerformed = true;
    $query = "SELECT * FROM users WHERE
        name LIKE ? OR
        CAST(age AS CHAR) LIKE ? OR
        department LIKE ? OR
        course LIKE ? OR
        gender LIKE ?";
    $param = "%$search%";

    $stmt = $conn->prepare($query);
    $stmt->bind_param("sssss", $param, $param, $param, $param, $param);
    $stmt->execute();
    $result = $stmt->get_result();
```

```

$results = $result->fetch_all(MYSQLI_ASSOC);

}

?>

<!DOCTYPE html>
<html>
<head>
    <title>Search Users</title>
    <link rel="stylesheet" href="display.css">
</head>
<body>

<h2>User Search</h2>

<form method="GET" action="">
    <input type="text" name="search" placeholder="Search by name, age,
department, course, or gender" value="<?= htmlspecialchars($search) ?>" style="width: 400px; padding:8px; font-size:16px;">
    <button type="submit" style="padding: 9px 20px; font-size: 16px; cursor: pointer;">Search</button>
</form>

<?php if ($searchPerformed): ?>
<?php if (!empty($results)): ?>
<table>
    <tr>
        <th>ID</th><th>Name</th><th>Email</th><th>Age</th><th>Gender</th><th>Course</th><th>Phone</th><th>Department</th>
    </tr>
    <?php foreach ($results as $row): ?>
        <tr>
            <td><?= $row['id'] ?></td>
            <td><?= htmlspecialchars($row['name']) ?></td>
            <td><?= htmlspecialchars($row['email']) ?></td>
        </tr>
    <?php endforeach; ?>
</table>

```

```

<td><?= $row['age'] ?></td>
<td><?= $row['gender'] ?></td>
<td><?= htmlspecialchars($row['course']) ?></td>
<td><?= htmlspecialchars($row['phone']) ?></td>
<td><?= htmlspecialchars($row['department']) ?></td>
</tr>
<?php endforeach; ?>
</table>
<?php else: ?>
<p class="no-results">No users found matching your search.</p>
<?php endif; ?>
<?php endif; ?>

</body>
</html>

```

Database code:

```

CREATE DATABASE userdb;
USE userdb;

CREATE TABLE users (
    id INT AUTO_INCREMENT PRIMARY KEY,
    name VARCHAR(100) NOT NULL,
    email VARCHAR(100) NOT NULL,
    age INT NOT NULL,
    password VARCHAR(255) NOT NULL,
    gender VARCHAR(10) NOT NULL,
    course VARCHAR(100) NOT NULL,
    phone VARCHAR(20) NOT NULL,
    department VARCHAR(100) NOT NULL
)

```

```
) ;
```

index.css:

```
body {  
    font-family: Arial, sans-serif;  
    background-color: #f4f6f8;  
    padding: 40px;  
}  
  
h2 {  
    color: #333;  
    margin-bottom: 20px;  
}  
  
.user-form {  
    background-color: #fff;  
    max-width: 400px;  
    padding: 30px;  
    border-radius: 8px;  
    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);  
    margin: auto;  
}  
  
.user-form label {  
    display: block;  
    margin-bottom: 6px;  
    font-weight: bold;  
}  
  
.user-form input[type="text"],  
.user-form input[type="email"],
```

```
.user-form input[type="number"],  
.user-form input[type="password"],  
.user-form select {  
    width: 100%;  
    padding: 8px 10px;  
    margin-bottom: 15px;  
    border: 1px solid #ccc;  
    border-radius: 4px;  
    box-sizing: border-box;  
    font-size: 14px;  
}  
  
.user-form button {  
    width: 100%;  
    padding: 12px;  
    background-color: #007BFF;  
    border: none;  
    color: white;  
    font-size: 16px;  
    font-weight: bold;  
    border-radius: 5px;  
    cursor: pointer;  
    transition: background-color 0.3s ease;  
}  
  
.user-form button:hover {  
    background-color: #0056b3;  
}
```

Output:

[Form:](#)

User Registration Form

Name:

Email:

Age:

Password:

Gender:

Course:

Phone:

Department:

Submit

Data Retrieval Page:

User Search

Search

ID	Name	Email	Age	Gender	Course	Phone	Department
2	Alice Johnson	alice.johnson@example.com	22	Female	BSc CSE	0171000001	Computer Science
4	Clara Evans	clara.evans@example.com	21	Female	English Literature	0171000003	Arts
6	Emily Davis	emily.davis@example.com	22	Female	Marketing	0171000005	Business
8	Grace Miller	grace.miller@example.com	23	Female	Psychology	0171000007	Social Science
10	Irene Thomas	irene.thomas@example.com	24	Female	Law	0171000009	Law
12	Karen Young	karen.young@example.com	22	Female	BSc CSE	0171000011	Computer Science
14	Mia Scott	mia.scott@example.com	21	Female	Journalism	0171000013	Arts
16	Olivia Green	olivia.green@example.com	22	Female	Marketing	0171000015	Business
18	Queen Foster	queen.foster@example.com	23	Female	Psychology	0171000017	Social Science
20	Sophia James	sophia.james@example.com	24	Female	Law	0171000019	Law

User Search

Search

ID	Name	Email	Age	Gender	Course	Phone	Department
1	Nayem	nayem@gamil.com	23	Male	Web Engineering	01323345656	CSE
2	Alice Johnson	alice.johnson@example.com	22	Female	BSc CSE	0171000001	Computer Science
12	Karen Young	karen.young@example.com	22	Female	BSc CSE	0171000011	Computer Science

Database:

Extra options													
	#	id	name	email	age	password	gender	course	phone	department	created_at		
<input type="checkbox"/>				1	Nayem	nayem@gamil.com	23	\$2y\$10\$bsIDNjsIVmZ10UsSqqvdeKkQDJzGFM7l2Qswx9MLo...	Male	Web Engineering	01323345656	CSE	2025-07-28 13:15:40
<input type="checkbox"/>				2	Alice Johnson	alice.johnson@example.com	22	123456	Female	BSc CSE	0171000001	Computer Science	2025-07-28 13:22:49
<input type="checkbox"/>				3	Bob Smith	bob.smith@example.com	24	abcdef	Male	BBA	0171000002	Business	2025-07-28 13:22:49
<input type="checkbox"/>				4	Clara Evans	clara.evans@example.com	21	pass123	Female	English Literature	0171000003	Arts	2025-07-28 13:22:49
<input type="checkbox"/>				5	David Lee	david.lee@example.com	23	mypassword	Male	Mechanical Engg	0171000004	Engineering	2025-07-28 13:22:49
<input type="checkbox"/>				6	Emily Davis	emily.davis@example.com	22	emily22	Female	Marketing	0171000005	Business	2025-07-28 13:22:49
<input type="checkbox"/>				7	Frank Brown	frank.brown@example.com	25	frankpass	Male	EEE	0171000006	Engineering	2025-07-28 13:22:49
<input type="checkbox"/>				8	Grace Miller	grace.miller@example.com	23	grace123	Female	Psychology	0171000007	Social Science	2025-07-28 13:22:49
<input type="checkbox"/>				9	Henry Wilson	henry.wilson@example.com	22	henrypass	Male	Pharmacy	0171000008	Health Science	2025-07-28 13:22:49
<input type="checkbox"/>				10	Irene Thomas	irene.thomas@example.com	24	irene456	Female	Law	0171000009	Law	2025-07-28 13:22:49
<input type="checkbox"/>				11	Jack Turner	jack.turner@example.com	23	jack789	Male	Finance	0171000010	Business	2025-07-28 13:22:49
<input type="checkbox"/>				12	Karen Young	karen.young@example.com	22	karenpass	Female	BSc CSE	0171000011	Computer Science	2025-07-28 13:22:49
<input type="checkbox"/>				13	Leo Hall	leo.hall@example.com	24	leopass	Male	BBA	0171000012	Business	2025-07-28 13:22:49
<input type="checkbox"/>				14	Mia Scott	mia.scott@example.com	21	mia123	Female	Journalism	0171000013	Arts	2025-07-28 13:22:49
<input type="checkbox"/>				15	Nathan Adams	nathan.adams@example.com	23	nathanpass	Male	Civil Engg	0171000014	Engineering	2025-07-28 13:22:49
<input type="checkbox"/>				16	Olivia Green	olivia.green@example.com	22	olivia22	Female	Marketing	0171000015	Business	2025-07-28 13:22:49
<input type="checkbox"/>				17	Peter Baker	peter.baker@example.com	25	peterpass	Male	EEE	0171000016	Engineering	2025-07-28 13:22:49
<input type="checkbox"/>				18	Queen Foster	queen.foster@example.com	23	queen123	Female	Psychology	0171000017	Social Science	2025-07-28 13:22:49
<input type="checkbox"/>				19	Robert Hayes	robert.hayes@example.com	22	robertpass	Male	Pharmacy	0171000018	Health Science	2025-07-28 13:22:49

Procedure:

1. Setup Environment:

- a. Created a MySQL database named userdb.
- b. Created a table called users with columns for user details like name, email, age, gender, course, phone, and department.

2. Insert Sample Data:

- a. Added several user records into the users table using SQL insert queries.

3. Create PHP Script to Retrieve Data:

- Created a PHP page (display.php) to get in touch with the MySQL database through mysqli.
- It has applied a SQL SELECT command to retrieve user records.
- Put in a search window that enables sorting through keywords on various headings such as the name, age, department, course, and gender.
- Employed prepared statements to avert SQL injection

4. Display Data on Webpage:

- Retrieved query results were displayed in an HTML table.
- Applied CSS styling via an external stylesheet to improve the presentation of the form and table.

5. Testing:

- Accessed the page in a web browser.
- Tested searching with various keywords to verify filtering and display of correct data.

Conclusion: The lab was able to show the process on reading and showing a MySQL database data on a webpage using php. With search feature incorporated, it was possible to dynamically filter results. Prepared statements made things more secure and easy to use on CSS. This drill boosted practicality that is vital in developing dynamic, data driven web applications.